

Amendment to Claims

1. (currently amended) A method comprising:

creating a plurality of nanotubes, the nanotubes each having a substantially cylindrical wall and a plurality of magnetic atoms that are ~~encircled by~~ attached to the wall;

aligning the nanotubes on a grid having metal lines, such that each of the nanotubes has a first portion that overlaps a metal grid line and a second portion that does not overlap the metal grid line; and

removing the second portions.

2. (original) The method of claim 1, wherein creating the plurality of nanotubes includes arc discharge, laser evaporation or chemical vapor deposition.

3. (original) The method of claim 1, wherein creating the plurality of nanotubes includes forming small cluster of magnetic atoms in the nanotube, such that the nanotube exhibits superparamagnetism at room temperature.

4. (original) The method of claim 1, wherein creating the plurality of nanotubes includes forming a magnetic alloy containing cobalt, nickel or iron in the nanotube.

5. (original) The method of claim 1, wherein aligning the nanotubes on the grid includes applying a magnetic force.

6. (original) The method of claim 1, wherein aligning the nanotubes on the grid includes scanning a row of sharp tips over the grid.

7. (original) The method of claim 1, wherein removing the second portions includes applying an electric current the grid.

8. (original) The method of claim 1, wherein removing the second portions includes etching the second portions with the grid as an etching mask.
9. (new) The method of claim 1, wherein the grid of metal line is made up of ferromagnetic materials.
10. (new) The method of claim 1, wherein the length of nanotubes is longer than the spacing between neighboring metal lines of the grid.
11. (new) The method of claim 1, wherein aligning the nanotubes on the grid includes applying a magnetic field.
12. (new) The method of claim 1, wherein aligning the nanotubes on the grid includes applying a magnetic field gradient.